

Thermocapillary and Multicomponent Stability Maps in various Parameter Spaces

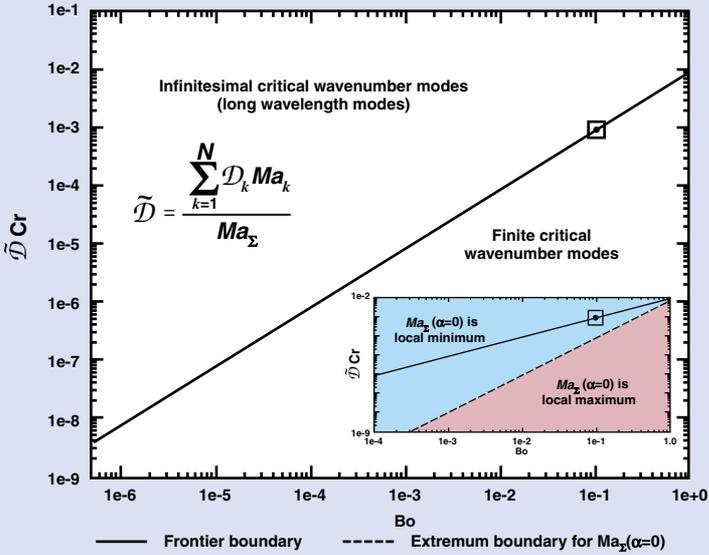


Figure 4.—Frontier point boundaries in $(Bo, \tilde{D} Cr)$ space. The dashed line in the insert is the extremum boundary for $Ma_z(\alpha=0)$. Above the dashed line, $Ma_z(\alpha=0)$ is a local minimum, below this line is a local maximum.

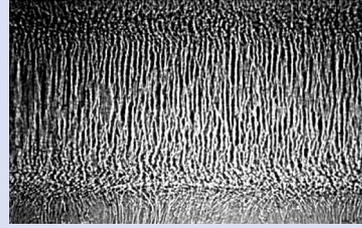


Figure 1.—Salt Finger Formation, photo courtesy of Professor C.F. Chen, 1998.

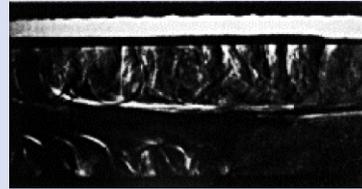


Figure 2.—Onset double-diffusive instability, Tanny, Chen, Chen, 1995, JFM vol 303.

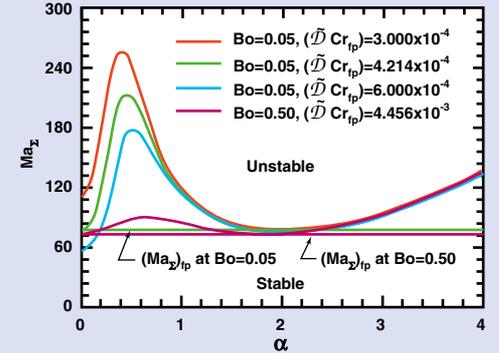


Figure 3.—Stationary stability boundaries for different values of Bo and $(\tilde{D} Cr)_{ip}$. Two curves shown are taken at frontier points associated with Bo values of 0.05 and 0.50.

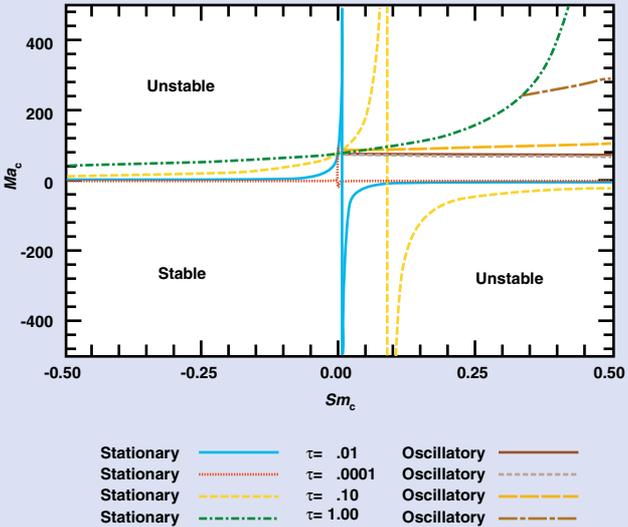


Figure 5.—Effect of diffusivity ratio, t , on stability maps in (Sm_c, Ma_c) space. ΔC is induced by applied ΔT . Oscillatory instability occurs above the oscillatory boundaries in the upper right-hand quadrant.

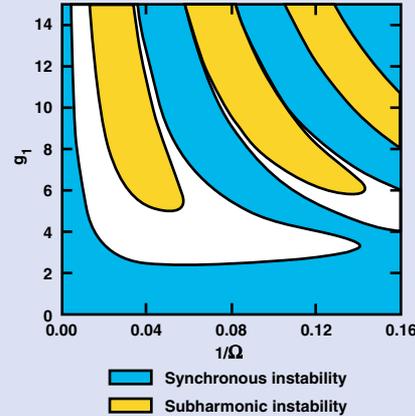


Figure 6.—Stability boundaries in $(1/\Omega, g_1)$ space for $\alpha=2, Ra=1000, Ma=118.77, Pr=1, g_0=0$.

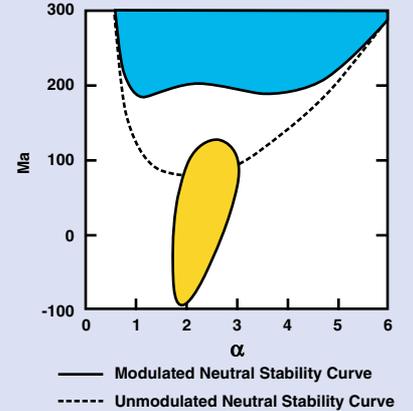


Figure 7.—Neutral stability curve for $Pr=1, g_0=0, g_1=5, Ra=1000$.

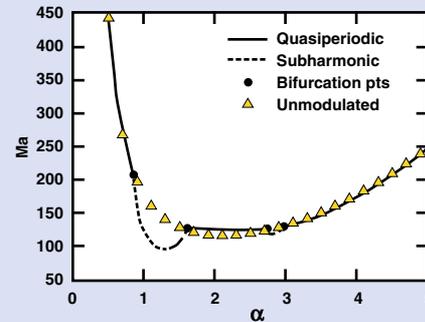


Figure 8.—Neutral stability curves for gravity modulated double diffusion. $Ms=-700, Pr=10, \mathcal{D}_{22}=0.1, Ra=1000, g_0=0, g_1=1, \Omega=5$.

